AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. Contract ID Code	Page	Of
Firm-Fixed-Price	1	11

2. Amendment/Modification No.	3. Effective Date	4. Requisition/Purchase Req No.	5. Project No. (If applicable)
P00005	2003APR22	SEE SCHEDULE	

6. Issued By Code W56HZV

TACOM WARREN BLDG 231
AMSTA-LC-AL-P
SUE STONER (586)574-8350
WARREN, MICHIGAN 48397-5000
HTTP://CONTRACTING.TACOM.ARMY.MIL
EMAIL: STONERS@TACOM.ARMY.MIL

7. Administered By (If other than Item 6) Code S2404A

DCMA VIRGINIA
10500 BATTLEVIEW PKWY
SUITE 200
MANASSAS VA 20109-2342

SCD C **PAS** NONE **ADP PT** HQ0338

8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code)

RADIAN INC.
5845 RICHMOND HWY
ALEXANDRIA, VA. 22303-1865

TYPE BUSINESS: Large Business Performing in U.S.

Code 2R341 **Facility Code**

☐ **9A. Amendment Of Solicitation No.**

9B. Dated (See Item 11)

☒ **10A. Modification Of Contract/Order No.**
DAAE07-02-F-0057

10B. Dated (See Item 13)
2002SEP25

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ **The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers**
☐ **is extended,** ☐ **is not extended.**

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing items 8 and 15, and returning _____ copies of the amendments: (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting And Appropriation Data (If required)
ACRN: AD NET DECREASE: -$132,673.00

13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS
It Modifies The Contract/Order No. As Described In Item 14.

KIND MOD CODE: G

☐	**A. This Change Order is Issued Pursuant To: The Changes Set Forth In Item 14 Are Made In The Contract/Order No. In Item 10A.**
☐	**B. The Above Numbered Contract/Order Is Modified To Reflect The Administrative Changes (such as changes in paying office, appropriation data, etc.) Set Forth In Item 14, Pursuant To The Authority of FAR 43.103(b).**
☒	**C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of:** Mutual Agreement of the Parties
☐	**D. Other (Specify type of modification and authority)**

E. IMPORTANT: Contractor ☐ **is not,** ☒ **is required to sign this document and return _____ copies to the Issuing Office.**

14. Description Of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE SECOND PAGE FOR DESCRIPTION

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. Name And Title Of Signer (Type or print)		16A. Name And Title Of Contracting Officer (Type or print)	
		MICHAEL T. FINNELL FINNELLM@TACOM.ARMY.MIL (586)574-8361	
15B. Contractor/Offeror	**15C. Date Signed**	**16B. United States Of America**	**16C. Date Signed**
_____ **(Signature of person authorized to sign)**		**By** /SIGNED/ **(Signature of Contracting Officer)**	2003APR22

SECTION A - SUPPLEMENTAL INFORMATION

PREVIOUS CONTRACT AMOUNT: $1,914,593.00
AMOUNT OF THIS ACTION: ($ 132,673.00) DECREASE
TOTAL AMOUNT AMOUNT: $1,781,920.00

1. The purpose of Modification P00005 is modify the contract as follows:

a. Section B the dates on CLINs 0001AA, 0002AA and 0002AB are extended to April 1, 2005.

b. Section B: CLIN 0001AC is decreased by $132,673 from $249,960 to $117,287.00 and the 1136 labor hours for a Sr. Systems Integrator/Developer are deleted in their entirety.

c. Section C, Paragraph C.4.7, the requirement for Security and Accessibility, is deleted. Paragraph C.4.7 is now "RESERVED."

d. Section G is revised to incorporate the changes to the appropriations data as a result of the above.

e. Section J is revised to provide the new date of April 12, 2004 for the revised Attachment 2.

f. Attachment 2, "Interactive Electronic Technical Manual Contract Requirements" is deleted its entirety and revised Attachment 2, dated April 12, 2004, is substituted in lieu thereof.

2. As a result of this action the total contract amount is decreased by $132,673.00 from $1,914,593.00 to $1,781,920.00. All other terms and conditions are unchanged.

*** END OF NARRATIVE A 005 ***

Name of Offeror or Contractor: RADIAN INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS				
0001AA	SERVICES LINE ITEM				$ 1,555,129.00
	NOUN: LAV/OSD IDE-PHASE II PRON: T122T1144K PRON AMD: 03 ACRN: AA CUSTOMER ORDER NO: M6785402MP91B83				
	Inspection and Acceptance INSPECTION: Origin ACCEPTANCE: Origin				
	Deliveries or Performance DLVR SCH REL CD: 001 — QUANTITY: 0 — PERF COMPL DATE: 01-APR-2005 $ 1,555,129.00				

Name of Offeror or Contractor: RADIAN INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AC	SERVICES LINE ITEM				$ 117,287.00

NOUN: IDE PHASE 2 ON-SITE SUPPORT
PRON: T64DAV244K PRON AMD: 01 ACRN: AD
AMS CD: 4238290
CUSTOMER ORDER NO: DWAM40065

Period of performance begins 1 February 2004.
Senior Program Manager: Not to exceed 640 hours.

(End of narrative B001)

Inspection and Acceptance
INSPECTION: Destination ACCEPTANCE: Destination

Deliveries or Performance

DLVR SCH REL CD	QUANTITY	PERF COMPL DATE
001	0	30-SEP-2004

$ 117,287.00

Name of Offeror or Contractor: RADIAN INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AA	SERVICES LINE ITEM				$ 44,980.00

CLIN CONTRACT TYPE:
Cost Contract
NOUN: OSD PHASE II TRAVEL
PRON: T122T1134K PRON AMD: 02 ACRN: AA
CUSTOMER ORDER NO: M6785402MP91B83

Inspection and Acceptance
INSPECTION: Destination ACCEPTANCE: Destination

Deliveries or Performance

DLVR SCH REL CD	QUANTITY	PERF COMPL DATE
001	0	01-APR-2005

$ 44,980.00

Name of Offeror or Contractor: RADIAN INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AB	SERVICES LINE ITEM				$ 25,000.00

NOUN: TRAVEL LAV/OSD PILOT PRG
PRON: T122T3534K PRON AMD: 01 ACRN: AC
CUSTOMER ORDER NO: M9545002MP22049

Inspection and Acceptance
INSPECTION: Destination ACCEPTANCE: Destination

Deliveries or Performance

DLVR SCH REL CD	QUANTITY	PERF COMPL DATE
001	0	01-APR-2005

$ 25,000.00

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

PM-LAV
INTEGRATED DATA ENVIRONMENT (IDE) UPGRADE PROGRAM
PHASE 2

C.1.0 SCOPE OF WORK: The purpose of this Scope of Work (SOW) is to acquire technical support services for design, development, and implementation of expanded/increased functional capabilities for the PM-LAV/OSD IDE developed under Task Order DAAE07-01-F-0041 to contract GS-35F-0695J. The objective is to expand weapon system life-cycle support capabilities beyond the current IDE infrastructure. At the same time, this effort will leverage current PM-LAV IDE capabilities and develop and deliver new functionalities that can be applied as a template for implementation across all of MARCORSYSCOM/MATCOM in regards to weapon life-cycle management.

C.2.0 PERIOD OF PERFORMANCE: The period of performance is 31 months after award of the task order.

C.3.0 PROJECT PLAN: The contractor shall develop and implement a management plan to control and direct the execution of this program. Initial review of this plan by all affected parties shall be within 15 working days of award of this task order and will take place at a mutually agreed upon location.

C.4.0 CONTRACTOR TASKING: The contractor shall identify, design, develop, configure, or customize and implement enhanced IDE functionality in support of PM LAVs/MARCORSYSCOM weapon system life-cycle support responsibilities.

C.4.1 IDE FUNCTIONALITY: The contractor shall analyze, design, develop, and implement enhanced IDE functionality based on; 1) Requirements Analysis, dated 14 January 2002, delivered under the PM-LAV/OSD IDE task order 2) lessons learned from the Operational Evaluation and Review Phase of the PM-LAV/OSD IDE project and; 3) performing a new Requirements Analysis on PM-LAV identified functionality; 4) a best in class review of other systems/programs/methodologies both inside and outside of the Marine Corps and Department of Defense related to total life cycle management.

C.4.2 PUBLIC WEBSITE RE-DESIGN: The contractor shall define PM-LAV requirements for a complete re-design of PM-LAV public website (http://). The contractor shall develop a SOW defining PM-LAV requirements and develop the PM-LAV public website upon acceptance of the approved SOW by PM-LAV. The public website re-design shall be 508 compliant.

C.4.3 RESERVED.

C.4.4 PRODUCT LIFE CYCLE MANAGEMENT (PLM) REQUIREMENT ANALYSIS: The contractor shall conduct a Requirement Analysis for a Product Life-Cycle Management (PLM) enterprise solution. The contractor shall design, develop, and submit for review and approval a PLM requirements analysis report in contractor format. The requirements analysis report shall cover, at a minimum, the current business processes and identify potential process improvements utilizing the PLM solution. The requirements analysis report shall recommend a phased PLM implementation approach with associated prices, quote, timeframes, and major milestones for each phase. Requirements analysis shall also include any interface requirements with the current PM-LAV IDE.

C.4.5 INTERACTIVE ELECTRONIC TECHNICAL MANUALS (IETMs): The Contractor shall design develop, and implement an integrated IETM solution with the IDE Portal. The Contractor shall design a parts order history database and sensor database and integrate the IETMs into the PM-LAV IDE. Reference contract Attachment 0002, "Interactive Electronic Technical Manuals Contract Requirements."

C.4.6 RESERVED.

C.4.7 RESERVED.

C.4.8 CONFIGURATION MANAGEMENT: The Contractor will design, develop, and implement a Configuration Management System (CMS) intended to capture and sustain weapon system configuration by model type and serial number. Specifically, LAV is concentrating on the platform and modification instruction information that can be capture/validated as vehicles are processed through the SLEP upgrade. The contractor shall develop an automated tool that maintenance technicians can use to record inspection findings on applied modification for each specific vehicle. Additionally, this tool shall provide the capability to perform and record Limited Technical Inspections (LTI) on PM-LAV vehicles.

C.4.9 CONDITION-BASED MAINTENANCE: The contractor shall implement/integrate Condition-Based Maintenance (CBM) functionality developed under a separate PM-LAV contract into the portal. The contractor shall coordinate with the CBM development contractor, Rochester Institute of Technology (RIT), to share information and plan for integration of the CBM system into the portal. The contractor shall identify interface requirements to update the IDE with gathered sensor data from RIT. The contractor shall work with LAV personnel on functional requirements to search, sort, report, and display sensor data from within the IDE.

C.4.10 REQUIREMENTS ANALYSIS (RA) REPORT: The contractor shall design, develop, and submit for approval a Requirements Analysis Report in government- defined format. The contractor shall submit an RA for the functional elements in C.4.4, C.4.5, C.4.8, and C.4.9.

C.4.11 DETAILED SYSTEM DESIGN (DSD) DOCUMENT: The contractor shall design, develop, and submit for approval a Detailed System Design

document based on the approved Requirements Analysis Report. The Design document shall be in government-defined format. The contractor shall submit a DSD for the functional elements in C.4.5.

C.4.12 USER ACCEPTANCE TEST (UAT) PLAN: The contractor shall design, develop, and submit for approval a User Acceptance Test Plan and scripts in government-defined format. The UAT will cover the functional elements in C.4.5, and C.4.8 at a minimum.

C.4.13 TRAINING PLAN: The contractor shall design, develop, and submit for approval an IDE Training Plan in government-defined format for the functional element in C.4.5.

C.4.14 TRAINING GUIDES: The contractor shall design, develop, and submit for approval User and System Administrator Training Guides for the enhanced IDE functionality. Training guides shall be in government-defined format for the functional element in C.4.5.

C.4.15 FIELDING PLAN: The contractor shall design, develop, coordinate, and submit for approval a Fielding Plan for implementing the enhanced PM-LAV IDE.

C.4.16 STATUS REPORTS: Contractor shall submit monthly status reports in contractor format. The contractor will also provide status briefings as requested by PM-LAV. Briefings may be provided either through VTC or in person, as requested by PM-LAV.

C.4.17 FUNCTIONAL SOLUTION: Contractor shall develop and deliver a fully functional and comprehensive Hardware and Software system that incorporates all identified requirements and is easily exportable/expandable across all of MARCORSYSCOM and/or MATCOM.

C.4.18 WORKFLOW UPGRADES:

a. The Contractor shall install the following upgrades to all workflows:
1. Provide the capability to search any field in the database.
2. Provide the ability to search in the Description field using *.* or similar command/wildcard notation.
3. Provide the capability to recall and/or modify the workflow after it has been launched, but prior to final approval.

b. The Contractor shall install the following upgrades to the Tasking workflow:
1. Provide Completed on-time and Completed Late selection criteria options to tasking report.
2. Provide the capability for users to remove selected attached documents and emails during the approval state.
3. Setup Reminder Feature to run twice daily beginning at 12:00 a.m.
4. Automatically notify assignee by email when a task is due, based on business rules identified by PM-LAV.
5. Allow SMEs to reassign tasks.

c. The Contractor shall install the following upgrades to the Travel workflow:
1. Provide the capability for secretary to copy furnish the Budget Office once travel has been approved.
2. Provide notification to secretary after Budget Office has approved funding.
3. Provide the capability for the secretary or supervisor to approve travel orders by selecting Funded/Approved.
4. Provide CC notification to the secretary at the Initiator and Dev Level only.
5. Add Field/Column Itinerary Link in Reports and Summary.
6. Provide options for None or NA in dropdown box for review and approver.
7. Provide the capability to automatically add the travel information to appropriate team calendars, division calendars, and individual calendars.

d. The Contractor shall install the following upgrades to the Procurement workflow:
1. Provide the capability to attach files and emails at all stages of processing.
2. Provide the capability to pull back a PR in process for editing purposes, retain all attachments and comments. Once editing has been completed provide the ability to restart the review process.
3. Provide CC capability at all stages.

e. The Contractor shall install the following upgrades to the Training workflow:
1. Provide the option to select specific training days and post to the training calendar as well as the personal calendar.
2. Add field Location to form.
3. Add field Location to form view.
4. Add field/column Location to reports and summary.
5. Add field School/Training Institute to form.
6. Add field School/Training Institute to form view.
7. Add field School/Training Institute to reports and summary.
8. Provide the capability to have a recurring event (e.g. school every Monday for 6 weeks).
9. Allow for training classes for training that is not on consecutive days without having to make multiple entries.

f. For the Report capability, in addition to the agreed to standard reports, the contractor shall allow the user to develop ad-hoc reports similar to querying a database such as Access. The user should be able to select fields, identify criteria for each field, sort fields, etc. These ad-hoc query reports shall be saveable, searchable and reusable. The contractor shall also improve the Push Reports web part to provide the information in a better format for Government use and allow users to show ad-hoc reports are per their

requirements.

g. For the CDRL workflow/calendar, allow changes after initial data loading and provide notification to subscribers when changes have been made. This may be done through a workflow or other method. Also revise CDRL workflow/calendar to allow for multiple delivery dates for a single CDRL.

Contract business process workflows per approved RA as defined in the approved DSD. PM-LAV IDE Phase II WR RA-DSD 0304003 and PM-LAV IDE Phase II WF RA-DSD 040803 define functional requirements for each of the workflows.

C.5.0 ON-SITE IDE SUPPORT TEAM: The Contractor shall provide a senior program manager on-site within PM-LAV for the duration of Phase II. They will be responsible for coordinating the integration of the Phase II requirements with the PM-LAV IDE, working to coordinate PM-LAV direction with the development team, and troubleshooting any integration problems or IDE performance problems. They will have shall have access, remote and local, to the network server using Government-Furnished Equipment.

*** END OF NARRATIVE C 001 ***

SECTION G - CONTRACT ADMINISTRATION DATA

LINE ITEM	PRON/ AMS CD/ MIPR	ACRN	OBLG STAT/ JOB ORD NO	PRIOR AMOUNT	INCREASE/DECREASE AMOUNT	CUMULATIVE AMOUNT
0001AC	T64DAV244K 4238290 DWAM40065	AD	2 4DA198	$ 249,960.00	$ -132,673.00	$ 117,287.00
				NET CHANGE	$ -132,673.00	

SERVICE NAME	NET CHANGE BY ACRN	ACCOUNTING CLASSIFICATION	ACCOUNTING STATION	INCREASE/DECREASE AMOUNT
Army	AD	21 42020000016D80304238290252G S20113	W56HZV	$ -132,673.00
			NET CHANGE	$ -132,673.00

	PRIOR AMOUNT OF AWARD	INCREASE/DECREASE AMOUNT	CUMULATIVE OBLIG AMT
NET CHANGE FOR AWARD:	$ 1,914,593.00	$ -132,673.00	$ 1,781,920.00

Name of Offeror or Contractor: RADIAN INC.

SECTION J - LIST OF ATTACHMENTS

List of Addenda	Title	Date	Number of Pages	Transmitted By
Attachment 002	INTERACTIVE ELECTRONIC TECHNICAL MANUAL CONTRACT REQUIREMENTS	12-APR-2004	005	

ATTACHMENT 0002
INTERACTIVE ELECTRONIC TECHNICAL MANUAL CONTRACT REQUIREMENTS

1.0 REQUIREMENT: PM-LAV has the requirement to acquire technical support services for the design, development, and implementation of Interactive Technical Manuals (IETM), Class 4 with the potential to go to Class 5, reference below for IETM Class definition.

2.0 TECHNICAL MANUALS: This effort will include all PM-LAV weapon system variants comprising 56 volumes (approximately 14,300 pages). Technical manual data will be submitted to the contractor in SGML Data Type Definition (DTD) MIL-STD NAVSEA C2 format with some graphic files delivered in CGM format. The manuals will be provided to the Contractor by the Government on a CD dated 30 Sep 03. Along with the Technical Manual data, the contractor will be provided DTDs, and may be provided with style sheets, FOSIs, etc. as GFI. The GFI under this contract is provided as is, e.g., PM-LAV cannot guarantee its accuracy in content or use for the purpose of providing the required IETM functionality. The contractor is not responsible for validating/verifying the technical content of the TM data provided as GFI. The contractor will utilize the existing as is content and will enrich it, in coordination with the government, with automated processes (e.g. pattern matching for links), in order to allow IETM functionality that will meet the requirements of this SOW.

2.1 The contractor is responsible for reviewing the GFI for IETM suitability in meeting functional requirements and if necessary, creating a hybrid GFI (DTD, Style Sheet, FOSI, etc.) to accommodate identified deficiencies in an automatic manner. If any hybrid DTD is created then the contractor shall deliver it with the final IETM and document what changes were made to the DTD and provide the rationale for any change. The developed IETM can be upgraded to a higher level DTD e.g. 2361B/C regardless of any contractor developed hybrid DTDs, Style Sheets, FOSIs etc. as addition to the scope of this SOW by appropriate modification of the contract.

2.2 IETM CLASS DEFINITION:

This SOW will utilize the following IETM Class definitions:
Class 4 - Hierarchically Structured IETMs
Interactive electronic display of technical information specifically authored into and maintained in a non-redundant relational or object-oriented hierarchical database. Source data is subsequently packaged (i.e., view packaged) as a run-time database for interactive presentation in accordance with DoD IETM specifications (MIL-M87268, MIL-D-87269, and MIL-Q-87270).

Class 5 - Integrated Database IETMs
Integrated electronic technical information system (IETIS) for interactive presentation of Class 4 IETMs integrated in with the data for other processes including expert-system rules for display of information and other user-applications such as diagnostics or computer-managed training.

IETM Class Definitions - DoD Classes of Electronic Technical Manuals by Eric L. Jorgenses, Carderock Division, Naval Surface Warfare Center, April 1994.

The current supplied content does not comply to MIL D-87269 but will either comply with Marine 25&P Technical manual DTD (public identifier: -//JCALS//DTD quest1-mclb-p-v1//EN) or to MIL-STD-2361 B/C (public identifier: -//USA-DOD//DTD MIL-STD-2361 TM Assembly REV 1.1 20000515//EN). Configuration of the application will be based on the specific requirements of PM LAV. The contractor will utilize the existing as is content and will enrich it, in coordination with the government, with automated processes (e.g. pattern matching for links), in order to allow IETM functionality that will meet the requirements of this SOW.

3.0 IETM FUNCTIONAL REQUIREMENTS: The contractor shall provide IETMs that conform, to the following functional requirements:

3.1 IETM and associated sustainment tools shall be NMCI compliant.

3.2 Government-provided DTD and source data shall not be altered other than specified in section 2.1.

3.3 IETM must be able to support multiple display and output formats:

3.3.1 Accessible via a common Internet Browser (primary browser is Internet Explorer version 5.5 and higher, IETM can be launched and viewable by Netscape version 6.0). IETM shall be viewable via the current PM-LAV IDE Portal and will be opened by a full browser window.

3.3.2 Downloadable for display on a desktop PC, laptop, or tablet computer.

3.3.3 Can be written to a CD ROM for distributed offline utilization.

3.3.4 Accessible to a PC, laptop, tablet, or pocket (PDA) computer via internal (network) or external dial-up access to the Internet.

Access shall be through the current PM-LAV IDE Portal.

3.3.5 IETM shall support multiple printing options such as: Print current page, print selected range of pages, print by chapter, print a section, or print a complete maintenance task, or print a complete manual. PM-LAV will work with subcontractors to resolve reference issues (e.g. - endless loop links, non relevant links etc.). Additionally, the IETM shall provide the capability to create a PDF output version in PM-LAV Technical Manual style and format for submission to the Defense Printing Service, other Government agencies, or commercial contractors.

3.3.5.1 The Contractor shall provide hot-spotting, tagging, and call-out capabilities for IETM graphic images. The contractor shall extract and hotspot any raster graphics (there are approximately 8,500) for the initial IETM development from PM LAV GFI dated 30 September 2003. There is a possibility that schematics (approx 70) will be provided by PM LAV in CGM or AUTOCAD format with either .DXF or .DWG file name extensions. Contractor will convert AUTOCAD graphics to .SVG in order to apply functional linking capability (to and from graphic). Schematics shall be delivered 120 days after award of Modification P00005 to the contract.

3.3.5.2 TIF Components shall be tagged such that they link from the text where the component is referenced to the image. Each image callout shall be linked to the IPB.

3.3.6 IETM shall provide the ability to display 2d raster and vector images with the capability to zoom in/out on a graphic.

3.3.7 The Government shall provide CGM graphics for schematic diagrams to be embedded in the IETM. These graphics shall provide the ability to perform color schematic tracing on circuits/sub-circuits, circuit tracing from sheet to sheet, and hi-lighting a designated circuit. CGM images shall be provided to the contractor with valid information (GroupIDs) and conforms to the schematic table. The contractor shall provide guidelines if requested. CGM graphics shall be delivered 120 days upon award of Modification P00005 to the contract.

3.3.8 IETM shall provide the ability to insert graphic art, animated video, and audio files in desired locations within the IETM. Art, video, and audio inserts shall be viewable with the associated browser plug-in and are based on existence of such plug-in on the client side (e.g. - Windows Media Player for video files such as AVI and MPEG).

3.3.9 Headers for displayed tables shall be fixed such that they remain visible while scrolling through the table.

3.3.10 IETM shall support, 800 X 600 or higher pixel display resolution.

3.4 IETM shall provide a flexible searching capability across all volumes and return results with hyperlinks to selected areas. Searching capability shall be provided via a user friendly interface with functionality dependant on clear identification of these elements in the content or ability to use automated processes (e.g. pattern matching); such as but not limited to:

Search By Part Number
Search by National Stock Number (NSN)
Search by Cage Code
Search by Nomenclature
Search by image
Search in a single volume, multiple volumes, or all volumes
Provide Boolean and wild card searching capabilities
Ability to save (name) search parameters for future use
Display search results in a user-friendly table format with hyperlinks to search results.
Provide a logical path, next button, to multiple instances of returned results e.g., same part located in multiple locations.
Provide the ability to download (Word and Excel) and print returned search results.

3.5 IETM shall provide the capability to interface with the PM-LAV Configuration Management application for the purpose of identifying specific serialized weapon system configurations while viewing the IETM, via SQL query utilizing JDBC. The contractor is responsible for the development of the Configuration Management database and application to allow this interface and for development of the IETM interface with the CM application.

3.5.1 IETM shall provide the capability for the user to enter vehicle serial number(s) and display the current configuration for each vehicle e.g., current modification instructions applied and not applied via graphical user interface with content provided by the contractor-developed database. The existence of relevant accurate content is PM LAVs responsibility.

3.5.2 IETM shall provide the capability to update the vehicle configuration in the PM-LAV Configuration Management application to reflect application of modification instruction by submitting the information of the performed tasks/procedures provided in the content, to the database, utilizing JDBC.

3.5.3 IETM shall provide the capability to perform a Limited Technical Inspection (LTI) on a vehicle using the Configuration

Management Systems LTI form. Additionally, the IETM shall provide the ability to view latest LTI information on a specific vehicle. This will be done by adding a hard coded link from the IETM to an LTI form that is developed and maintained by the contractor as part of the LTI system. Contractor shall provide the ability to print an LTI form.

3.5.4 IETM shall provide the ability to display multiple configurations for each PM-LAV weapon system variant e.g., display current IETM content along with changed content for approved ECPs at the same time (via hyperlinks). The IETM shall default to the IETM version appropriate to the configuration of the specific vehicle provided that the relevant information, i.e. serial number, model type, applicable MIs applied or not applied, will be delivered from the contractors Configuration Management database. The IETM shall also be able to indicate which ECPs have not been applied to a specific serialized weapon system based on the information supplied by the CM database and shall allow the user to navigate to the appropriate change content (via hyperlinks).

3.6 IETM shall provide the capability to interface with the sensor database located on the PM-LAV IDE and the maintenance computer (laptop/tablet) to capture/download vehicle sensor information that has been inserted to the DB utilizing a process that is a responsibility of the contractor. The IETM shall provide the ability to read captured fault codes from the DB utilizing JDBC and automatically navigate to the appropriate maintenance troubleshooting procedures, based on the existence of such content, within the IETM for maintenance corrective actions. Additionally, the IETM shall provide the ability for the user to manually enter a fault code and automatically navigate to the appropriate maintenance troubleshooting procedures within the IETM, associated with this fault code, according to consistent logical/pattern matching rules. PM-LAV will provide the contractor with a definitive list of fault codes and will assist the contractor with the establishment of the correct entry into the manuals from the fault code indication.

3.6.1 IETM shall provide the ability to display fault history for a specific serialized vehicle. This will be done via SQL query utilizing JDBC PM-LAV sensor data to include fault history shall be located on the PM-LAVIDE as the primary location and on the maintenance computer (laptop/tablet) until synchronized with the IDE. The contractor is responsible for the development of the offline/online databases and the synchronization between them.

3.7 IETM shall provide the capability to create, store, print, or e-mail (using mailto command utilizing existing mail system on the client machine) an electronic part order requisition in-accordance-with TM4700-15/1H and MILSTRIP 10925 format.

3.8 Task Item removed.

3.8.1 Task Item removed.

3.8.2 Task Item removed.

3.9 IETM shall have a sustainment tool for maintenance of the IETM SGML content once delivered to theGovernment (currently all is converted to SGML). A no-cost license for the contractor's sustainment tool shall be made available to the Government for use by either PM-LAV personnel, third party IETM sustainment vendor, Weapon System Upgrade contractor, or the selected IETM development vendor. Sustainment tool shall provide the ability to update the IETM due to approved Engineering Change Proposals (ECPs) and insert art graphics and animated videos in desired locations. It is desired that the sustainment tool allow for updating the IETM database through a user-friendly tool (i.e. - MS Word like template) without requiring knowledge of the underlying sustainment tool code.

3.9.1 The IETM shall provide the capability for the user to input Technical Manual issues on a NAVMC 10772 form. The contractor will provide an HTML form to be emailed (using mailto command utilizing existing mail system on the client machine).

3.9.2 IETM shall provide the ability to incorporate all approved and installed ECPs into a new IETM version and archive the old version. Archived IETMs shall be down loadable to a PC or CD ROM via the IETM. Archived version shall be viewable by selected (authorized) personnel. IETM archiving will be done by saving the CD installations/hard drive/back-up tapes - to be used at any future point in time.
Technical Specifications:
3.10 At a minimum, the IETM shall support the following hardware configuration and screen refresh rates:

Hardware: Pentium III 800 MHZ processor, 256Mb of RAM, 30 Gb Hardrive, 24X DVD/CD ROM drive.

Below is an access/page download timeframe guide for reference purposes. The intent is to optimize the IETM Web Pages to minimize download time for all authorized IETM users:

A file size of 100K is used for reference purposes.

Network Internet Access (T1)	1 second or less
56K Dial-Up Modem	18 seconds
28.8K Dial-Up Modem	34 seconds

Note: Actual download timeframes may vary based on network congestion.

Project implementation methodology:
4.0 PERIOD OF PERFORMANCE: The period of performance for the IETM effort is ten months from award of Modification P00005 (see schedule paragraph 6.0).

5.0 CONTRACTOR TASKING: The contractor shall design, develop, and implement IETM technology for PM-LAV in-accordance-with the above functional requirements. Additionally, the contractor shall perform the following tasks:

5.1 PROJECT PLAN: The contractor shall develop, coordinate, and submit for review agreement and approval an IETM implementation plan.

5.2 IN-PROGRESS REVIEWS (IPR): The contractor shall demonstrate progress to-date in the development of the IETMs. Frequency and format of IPRs will be mutually agreed 10 days upon award of Modification P00005 to the contract and reflected in the Project Plan. In addition, the contractor shall attend a start of work meeting at PM-LAV with PM-LAV's data conversion vendor. Further, the contractor shall attend up to three data conversion IPRs. Each IPR is expected to last 2 days with two being held in the Washington, DC area and one at PM-LAV.

5.2.1 SOURCE DATA DESCREPANCIES (SDD): The Contractor shall create and maintain a list of inconsistencies in the LAV technical data that prevent successful establishment of IETM hyperlinks. The purpose of this list is to assist the Government is correcting technical publication errors during the IETM sustainment phase. The list shall be maintained in Microsoft Excel and shall be made available to the Government at each IPR (where applicable). The final list shall be delivered to the Government.

5.3 DEMO IETM: The contractor shall develop a mini-demo IETM using PM-LAV provided data for the purpose of conducting the Requirements Analysis and Detailed System Design.

5.4 REQUIREMENTS ANALYSIS SESSION & REPORT: The contractor shall conduct a Requirements Analysis and Design session onsite with appropriate team members. The contractor shall design, develop, and submit for review and approval an IETM Requirements Analysis Report in the contractor-defined format.

Description: The contractors project management methodology calls for a detailed Requirements and Design Session. During this session, the parties will track down all the business and technical information needed for the implementation of the project in accordance with the subcontract responsibilities in this SOW. This session requires a detailed review of all manuals/data formats along with definition of all functionality. Review of the requested look and feel of the application and all technical aspects will be addressed. Any changes made to the scope of work during this session will be added into the contract by bilateral modification.

The session addresses: content/data structure, user interface design and functionality, and technical system implementation requirements.
Duration: 3-5 Days
Deliverables: Requirements Document and Detailed Analysis & Design document

5.5 DETAILED SYSTEM DESIGN DOCUMENT: The contractor shall design, develop, and submit for review and approval a Detailed System Design document based on the approved Requirements Analysis Report. The Design document shall be in contractor-defined format.

5.6 USER ACCEPTANCE TEST PLAN: The Contractor shall design, develop, and submit for review and approval a User Acceptance Test Plan and scripts in contractor defined format. The plan shall include testing the IETM and sustainment tool at the user level (read only) and administrative (changes to data files and/or IETM) level.

5.7 BETA: In order to allow better understanding of the final deliverable a Beta-version of the IETM shall be created based on the approved Detailed System Design. The Beta IETM shall demonstrate up to 50% of the approved functionality and data, and shall be submitted to the government for review and comments.
Deliverables: Beta IETM

5.8 RELEASE: The contractor shall deliver a production version (release) of the IETM solution. This release will contain all PM-LAVdata and demonstrated full functionality. The contractor shall be responsible for on-site IETM installation and testing prior to formal user acceptance testing.
Deliverables: Release publication & Sustainment tool

5.9 TRAINING PLAN: The contractor shall design, develop, and submit for review and approval an IETM Training Plan in contractor-defined format. Approved training dates shall be incorporated into the Project Plan.

5.10 TRAINING GUIDES: The contractor shall design, develop, and submit for review and approval User and IETM Administrator Training Guides. Training guides will conform to the Marine Corps Systematic Approach to Training.

5.11 TRAINING: The contractor shall provide 2-3 days of IETM train the trainers type training to LAV IETM users and to the PM-LAV

publishers on the sustainment tool, based on the approved Training Plan.
Assumptions:
5.12 KEY ASSUMPTIONS: This Statement of Work and the contractors estimates to perform the Statement of Work are based on the following key assumptions:

5.12.1 Browser Support - Accessible via a common Internet Browser (primary browser is Internet Explorer version 5.5 and higher.

5.12.2 Support for the following platform - Windows 98, Windows ME, NT 4.0, Windows 2000, Windows XP

5.12.3 IETM production environment support on Windows 2000

5.12.4 SGML data will conform to the same DTD throughout the period of performance of this SOW.

5.12.5 SGML data will conform to the same structure as the sample data that will be provided for development purposes.

5.12.6 PM-LAV is responsible for the actual content of any data file.

5.12.7 Removed task.

5.13 Laws, Regulations, and Statutes - The contractor is responsible for compliance with the Army NetWorthiness certification program and NMCI compliance. PMLAV shall sponsor the contractor in compliance with NMCI and Networthiness certification.

5.14 When CGM or AutoCad graphic files are submitted by PM-LAV, ESSI will convert the file format to SVG to facilitate the insertion of inbound and outbound linking capability.

6.0 Schedule - The following proposed schedule will commence 30 days upon award of Modification P00005 to the contract.

Perform Program Management	30 and monthly throughout
*Data sample for Demo	30
Demo IETM creation	30
Req Analysis & Design Session	30
Detailed Sys design doc creation	60
User Acceptance Test Plan creation	120
*Representative new data for Beta dev	150
Beta Development	180 and 210
*Full data delivery	210
Release Development	210, 240 and 270
Demo	300
Release Delivery	300
*Acceptance Tests	300
Training	300

* Identifies PM-LAV is responsible for providing.